

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
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Amendment of Part 101 of the Commission's)	WT Docket No. 07-54
Rules to Modify Antenna Requirements for)	RM-11043
the 10.7 – 11.7 GHz Band)	
)	

To: The Commission

**COMMENTS OF
UNION TELEPHONE COMPANY**

Union Telephone Company (Union), through its undersigned counsel, respectfully submits these Comments in response to the *Notice of Proposed Rulemaking (NPRM)* in the above-captioned matter, pursuant to section 1.415 of the Federal Communications Commission's (FCC's) rules.¹ As explained herein, Union is opposed to the potential proliferation of small, inexpensive antennas in the 10.7 – 11.7 GHz (11 GHz) band that could inhibit access to and the utility of this band for high-capacity, medium- to long-distance microwave links needed by carriers operating in primarily rural areas. However, to the extent such antennas are authorized, Union also recommends certain changes to the proposed rules to clarify the conditions under which they may be coordinated and used.

Union was founded in 1914 and has a long-standing history of providing vital telecommunications services in underserved rural areas. Based in Mountain View, Wyoming, Union provides local telephone service to approximately twenty-five rural communities in parts

¹ 47 C.F.R. § 1.415 (2006). The *NPRM* was published in the *Federal Register* at 72 Fed.Reg. 20494 (April 25, 2007), specifying a comment deadline of May 25, 2007.

of Wyoming, Colorado, and Utah. In 1990, Union expanded to cellular service and now provides, or is licensed to provide, coverage to an area encompassing over 123,611 square miles of mostly rural country. Although Union commenced operations with only eight cell sites, the demand for cellular service has caused this number to multiply to 200 cell sites located throughout Wyoming, northwestern Colorado, and parts of Utah. Union also holds licenses in the broadband Personal Communication Service (PCS), Lower 700 MHz band, and Advanced Wireless Service (AWS). Besides basic telephone and cellular service, Union also offers long distance, Internet, and cable television service. Because of the largely rural and mountainous terrain in Union's service territory, Union relies heavily on point-to-point microwave facilities licensed in the Part 101 Fixed Services (FS) to support its telephone and cellular operations. Moreover, as Union deploys additional wireless services Union foresees the need to license additional FS links, and particularly in the 11 GHz band. Union therefore has an interest in this proceeding.

The FCC has proposed to relax the technical specifications for antennas used in the 11 GHz band in order to allow use of 0.61 meter antennas. The proponent of this rule change, FiberTower, Inc., posits that authorization of these antennas will permit new services to be introduced in the 11 GHz band, will allow use of 11 GHz at sites that are incapable of supporting larger antennas, and that the optional use of 0.61 meter antennas will promote efficient use of the spectrum. FiberTower suggests that these antennas could be used for inexpensive "last-mile" delivery of wireless broadband service to locations that are otherwise prohibitively expensive or impossible to reach with 1.22 meter antennas meeting the current antenna standards for the 11 GHz band. However, FiberTower also argues that additional flexibility is needed in the 11 GHz band because much of the spectrum previously allocated to the FS has been reallocated to other

services in recent years, and new spectrum available to FS is suitable only for short-range applications.²

While Union appreciates interest in new services, Union opposes efforts to weaken the technical standards for the 11 GHz band in order to accommodate the multitude of new installations projected in the band by FiberTower and other proponents of smaller, less expensive antennas. Union has serious concerns about the ability of the 11 GHz band to accommodate these new installations as well as the traditional operations at 11 GHz that are critical for high capacity, long path lengths, particularly in rural areas. Given the extremely rural nature of Union's service territory and the very low population densities, Union relies heavily on point-to-point microwave for cost-effective cellsite backhaul.

As correctly noted by FiberTower, recent spectrum reallocation decisions have reduced the amount of spectrum available to carriers such as Union that have need for high capacity microwave links to reach remote areas. For example, Union currently operates numerous microwave paths in the 11 GHz band that are about 40 miles in length, with some even as long as about 50 miles. Opening access to the 11 GHz band for "last mile" connections with inexpensive and less efficient antennas could deplete the wider bandwidth channels needed to serve remote locations where fiber optic facilities cannot be economically deployed or where rights-of-way for fiber cannot be obtained due to federal government or tribal land use restrictions. Given the extremely low population densities in the areas it serves, Union can economically provide wireless service only if it has access to FS spectrum in bands that can accommodate high capacity and longer path lengths. Union therefore opposes the proposal to flood the 11 GHz band

² *NPRM* at paras. 7-8.

with devices that are intended for applications that are better suited in bands that are already available for shorter path lengths.

However, if the FCC decides to allow use of smaller antennas, Union recommends that the FCC also adopt reasonable limitations on the applications to be served with such antennas so that the 11 GHz band remains available, as a practical matter, to meet high capacity medium- to long-distance applications that cannot be met in other frequency bands or with other technologies. Such conditions on the use of the smaller antennas might include limits on path length, reduced EIRPs, or use only in urban areas.

Finally, if the FCC decides to allow the use of 0.61 meter antennas as proposed, Union strongly recommends that the rules retain the technical specifications applicable to 1.22 meter antennas. Although the *NPRM* correctly notes that the Rules do not mandate a specific size of antenna, the rules proposed in Appendix A to the *NPRM* would, in fact, specify a “1.22 meter antenna” as the benchmark by which interference cases would be evaluated.³ Since the Rules do not provide the technical parameters or characteristics of a “1.22 meter antenna,” Union recommends that Section 101.115(b)(2) of the Rules retain the relevant beamwidth, antenna gain, and sidelobe suppression characteristics currently associated with a 1.22 meter antenna so that applicants and licensees will have specific values by which interference predictions may be calculated.

³ *NPRM*, at Appendix A; proposed Rule Section 101.103(j).

WHEREFORE, THE PREMISES CONSIDERED, Union respectfully requests that the FCC consider these Comments and proceed in a manner consistent with the views expressed herein.

Respectfully submitted,

UNION TELEPHONE COMPANY

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